effective method of eradicating it; simply cutting it down, drying the severed parts in the sun, and burning them, which is a costly proceeding, will not always destroy the persistent vitality of the plant. The nine-lived cat would have no chance against the prickly-pear in a competition against death by violence. In the East Khándesh division, where there is not fortunately much prickly-pear, the beat guards dug it out wherever it showed itself. In the Násik division an area of 670,248 square feet within the Raolas Reserved Forest in the Niphád range was cleared of prickly-pear at a cost of Rs. 103-5-0. In the Ahmednagar division 16,179 cart-loads of prickly-pear were removed from 366 acres 26 gunthas of bábul forests in different ranges, and the material was buried in nálas and rifts under two feet of earth, the cost of the operation amounting to Rs. 1,034-8-0.

189. In the Poona division ten gangs of six men each have been engaged partly as famine work for varying periods in the Haveli, Indápur and Bhimthadi ranges in digging out prickly-pear and trimming the hedges of this interesting plant, wherever it was getting beyond bounds. 73½ acres were cleared entirely and 7,131 cart-loads of the prickly-pear were destroyed. Forest guards removed all young and fresh growth from the forests of their beats. Rs. 1,960-1-3 were expended in the division.

190. Prickly-pear was removed from the Burlé bábul reserve in the Tásgaon range by hired labour, at a cost of Rs. 198-12-6; and creepers were severed and killed by forest guards in the forests of the western ghát in the Sátára division.

191. All the forest guards of the Sholápur division are equipped with bill hooks to keep their reserves free of creepers and also to remove freshly intruding prickly-pear, and paid labour has been employed where the forest guards were unable to cope with the evil. This statement shows the work performed :—

No.	Ranges.	Square Feet.	Cost.
			Rs. a. p.
1	Sholápur	30,290	154 14 0
2	Mádha	18,074	86 1 6
3	Karmála	69,600	45 3 6
4	Málsiras	27,546	29 13 6
	Total ...	145,510	316 0 6

192. The forests of Khánbor and Singalkas in the Dángs were treated for creeper cutting; all the valuable timber trees which are of exceptionally promising growth were freed from the embraces of the large climbers, which were abundant and obstructive: the operation cost Rs. 7-9-0.

11.—COMMUNICATIONS AND BUILDINGS.

(*a*) Roads and Bridges.

193. The Divisional Forest Officer, West Khándesh, spent a small sum of Rs. 14-8-6 in repairing the Kalámbari road in the Pimpalner range, and the Divisional Forest Officer, Surat, executed the usual repairs to the main road in the Dángs extending from Waghai to near Dhuda, a distance of 36 miles, and to the branch road that ascends the Sarwar plateau from Pimpri and descends into the Purna valley at Kalibel, and from thence goes *viâ* Sajukpada on the Gira across the Rupgad hills, a distance of about 26 miles. The crossing of the Kapri river near Bibabari was cleared of boulders and made smooth and easy for the passage of timber laden carts. All the bridges in the lower Dángs, the planking of which had become rotten, worn out and unsafe, and the masonry work of which was in bad condition, underwent thorough repairs, and the bridge at Kasadpáda near Pimpri on the main timber road, which had been burnt down in the hot weather, was rebuilt.

194. The following is a brief account of the new works and repairs to existing roads, &c., undertaken during the year by the Public Works Department at the expense of the Provincial Service Budget, the original projects having been started either at the instance of, or with the concurring opinion of, the Forest Department :—

In the Thána district the Dáhánu-Jawhár road, 26 miles long, has been completed, practically, during the year, and will be extended to the Násik district; Rs. 12,690 have been expended upon it, making a total outlay of Rs. 2,09,519 on the road. The Váda-Shirghát road is a section of a projected road from Máhim and the Pálghar Station on the B. B. & C. I. Railway to cross the Sahyádri mountains by the Shirghát, and then to connect with the Ghoti Railway Station on the G. I. P. Railway beyond Igatpuri in the Násik district. The first 34 miles, Máhim to Váda, will be a local funds road, and will serve several forest blocks, the timber from whose coupes will travel to the Manor bandar and to the B. B. & C. I. Railway. The last 30¼ miles will be a provincial road; 21 miles of the road from Máhim east have been completed and are open to traffic, and the earth-works and culverts are finished on a further section of 8 miles. From Váda to the Shirghát the whole line is completed, and the road is already showing a heavy traffic from Váda to Parali, and some traffic up the ghát, but as soon as the through road to Ghoti is completed, it will be a busy thoroughfare; Rs. 43,007 have been expended on the road during the year of the report, making a total expenditure of Rs. 1,73,047. The earth-work of the forest roads through the Medwan and Nanewli khinds has been completed, and four wooden topped culverts have been constructed: the joining roads leading up to the khinds on both sides have been lined out, and earth-work on them is in progress. To make the roads useful the length of the joining roads will be extended from Manor to Shanvárpáda, about 4½ miles, and a branch of about 2½ miles to each of the khinds in place of the 6 miles originally proposed. Out of an estimate of Rs. 6,821, Rs. 200 have been expended on the Medwan khind during the year, and out of an estimate of Rs. 5,465, Rs. 999 have been spent on the Nanewli khind road. Mr. K. G. Desái, L.C.E., Executive Engineer of Thána, has been very helpful to the Forest Department in furnishing them with plans and estimates of roads and buildings, which have been projected from time to time in connection with the forest administration in the Thána Collectorate; and this officer has very fully earned the acknowledgments of the Forest Department for his ready and skilful assistance, and his ungrudging co-operation on all occasions, while the forest depôt houses, and the lines of traffic constructed by him afford evidence of the care and high professional knowledge with which he has directed these several works.

Mr. G. Owen Dunn, Executive Engineer of the Khándesh district, has made a commencement of the ghát road, leading down the Jakrai-bári from the Pimpalner táluka into the Dángs. The Dhuda Ghát about 12 miles in length in the Dángs has been surveyed and plans and estimates are under preparation. The road from Sháháda to Dondaicha, which carries a large timber traffic, has been in active progress, and 11 miles of the 17 are now open to carts.

The road from Hasteh to Barhe in táluka Peint of the Násik district, which will serve the exploitation of timber from State forests in Peint, has been in progress during the year, and a line of road between Ganeshgaon and Wasali in the Násik range, which will bring firewood into the city of Násik from the Ganeshgaon forests, has been planned and estimated.

In the Ahmednagar division the road from Randha to Samrad in the Akola range, the length of which is to be 9 miles and which is to pass the forests of Gohira and Bhundardareh, and is nearly parallel to the Prawara river, has been partially completed; and the road from Jámgaon to Kotul, which will open out forests in the Kotul valley, and is nearly 10 miles in length, passing over the Paibai Ghát, and through very hilly portions of the country, and crossing the Mula river near Kotul, has been opened to traffic, and a portion of it has been murumed where it is in black soil; a masonry dam has been built on the down stream side in the Mula river crossing.

In the Poona district 3 miles of the Ghore-A'mbegaon road, which will open out teak forests in the A'mbegaon range, has been finished during the year; and 2 miles have still to be constructed to lead the road into A'mbegaon.

In the Surat district a survey for a railway along the Tápti Valley towards the Khándesh district has been made this season by the B. B. & C. I. Railway Company, and when this line is constructed, it will be of very great benefit in opening out the Dángs.

(*b*) Buildings.

195. The following statement shows in detail the works constructed during the year at the cost of the Provincial Services Budget, by the Public Works Department, at the instance of the Conservator of Forests under sanctions given by him from the discretionary grant of Rs. 2,000, which had been placed at his disposal under the orders contained in Government Resolutions No. 170A—703 of 25th April 1891, and No. 428A—1723, dated 13th October 1891, in the Public Works Department :—

No.	Executive Officer.	Name and Locality of Works.	Amount sanctioned.		
			Rs.	a.	p.
1	Executive Engineer, Poona ...	For making improvement to the Range Forest Office at Paud	126	0	0
2	Do. do. ...	For certain alterations and additions to the Range Forest Office, Haveli ...	59	0	0
3	Do. Khándesh.	For concrete floors to the Range Forest Office at Navápur .	18	0	0
4	Do. do. ...	Do. do. Sindkheda.	18	0	0
5	Do. do. ...	Do. do. Sháháda ...	9	8	0
6	Do. do. ...	For providing stone paving to the Range Forest Office at Páchora ...	94	0	0
7	Do. Sátára ...	For providing doors to the window of Range Forest Office at Koregaon ..	9	0	0
8	Do. do. ...	For making additions and alterations to the roof of the Range Forest Office at Dahivadi...	242	0	0
9	Do. do. ...	For providing a bonnet to the window of the Range Forest Office at Wái ...	7	0	0
10	Do. do. ...	For new glazed shutters to the windows of the Range Forest Office in the New Adálat	77	0	0
11	Do. do. ...	For additions and alterations to the Range Forest Office, Sátára ...	62	0	0
12	Do. do. ...	For cloth ceiling to the Range Forest Office at Shirála	38	0	0
13	Do. Kaira ...	For providing a concrete flooring and plank ceiling to the Range Forest Office, Jhálod	88	0	0
14	Do. do. ...	For making a flooring to the Range Forest Office at Kálol	64	0	0
15	Do. Thána ...	For providing ceiling to the Range Forest Office at Mokháda.	115	0	0
16	Do. do. ...	Do. do. Karjat ...	113	0	0
17	Do. do. ...	For providing teakwood ceiling and concrete flooring to the Range Forest Office at Khálápur	76	0	0
18	Do. do. ...	For providing additions and alterations to the Range Forest Office at Máhím ...	125	0	0
19	Do. do. ...	Do. do. Umbargaon.	13	0	0
20	Do. do. ..	Do. do. Dáhánu ...	163	0	0
21	Do. do. ...	Do. do. Bassein ...	153	0	0
22	Do. do. ...	Do. do. Thána ...	76	0	0
23	Do. do. ...	Do. do. Váda ...	145	0	0
			1,890	8	0

196. The following additional works have been undertaken by the Public Works Department during the year at the cost of the Provincial Service Budget.